

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference ASW1528	FOR FURTHER ACTION	See item 4 below
International application No. PCT/GB2004/001729	International filing date (<i>day/month/year</i>) 23 April 2004 (23.04.2004)	Priority date (<i>day/month/year</i>) 25 April 2003 (25.04.2003)]
International Patent Classification (IPC) or national classification and IPC ⁷ G01N 23/04, H05G 1/60, A61B 6/03		
Applicant CXR LIMITED		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).
 2. This REPORT consists of a total of 8 sheets, including this cover sheet.
- In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input checked="" type="checkbox"/> Box No. II	Priority
<input checked="" type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/> Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI	Certain documents cited
<input type="checkbox"/> Box No. VII	Certain defects in the international application
<input type="checkbox"/> Box No. VIII	Certain observations on the international application
4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 740 14 35	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Date of issuance of this report 28 October 2005 (28.10.2005)</td> </tr> <tr> <td style="padding: 2px;">Authorized officer Dorothee Mülhausen</td> </tr> <tr> <td style="padding: 2px;">Telephone No. +41 22 338 87 40</td> </tr> </table>	Date of issuance of this report 28 October 2005 (28.10.2005)	Authorized officer Dorothee Mülhausen	Telephone No. +41 22 338 87 40
Date of issuance of this report 28 October 2005 (28.10.2005)				
Authorized officer Dorothee Mülhausen				
Telephone No. +41 22 338 87 40				

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

REC'D 10 AUG 2004

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To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing

(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/GB2004/001729

International filing date (day/month/year)
23.04.2004

Priority date (day/month/year)
25.04.2003

International Patent Classification (IPC) or both national classification and IPC
G01N23/04, H05G1/60, A61B6/03

Applicant
CRX LIMITED

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office - P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk - Pays Bas
Tel. +31 70 340 - 2040 Tx: 31 651 epo nl
Fax: +31 70 340 - 3016

Authorized Officer

Wulveryck, J-M

Telephone No. +31 70 340-3689



**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2004/001729

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material:
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing:
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2004/001729

Box No. II Priority

1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2004/001729

**Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial
applicability**

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application,
☒ claims Nos. 13

because:

- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):
☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 13 are so unclear that no meaningful opinion could be formed (*specify*):

see separate sheet

- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
☐ no international search report has been established for the whole application or for said claims Nos.
☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

- ☐ has not been furnished
☐ does not comply with the standard

the computer readable form

- ☐ has not been furnished
☐ does not comply with the standard

- ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.
☒ See separate sheet for further details

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2004/001729

Box No. V Reasoned statement under Rule 43*bis*.1(a)(I) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	9-12
	No: Claims	1-8
Inventive step (IS)	Yes: Claims	10-12
	No: Claims	1-9
Industrial applicability (IA)	Yes: Claims	1-12
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item III.

Non establishment of opinion

- 1 No opinion has been established on the subject matter of independent **claim 13**, for the following reason:

Claim 13 relies on references to the description and the drawings which is only allowed in exceptional situations (Rule 6.2(a) PCT). However, in this application this is not appropriate.

Re Item V.

- 2 The following documents are referred to in this communication:
D1 : US 4 057 725 A (WAGNER WOLFGANG) 08 November 1977 (1977-11-08)
D2 : FR 2 328 280 A (EMI limited) 13 May 1977 (1977-05-13)
D3 : US 4 274 005 A (YAMAMURA TOSHIO ET AL) 16 June 1981 (1981-06-16)

3 CLARITY

- 3.1 Claims 1, 3-12 are not supported by the description as required by Article 6 PCT, as their scope is broader than justified by the description and drawings. The reason therefore is the following: from the description and the drawings, it is clear that the apparatus is such that x-rays are emitted from separate x-ray sources located at discrete and fixed locations. However, the term "source positions" used in claims 1, 3-12 does not clearly render this idea.
- 3.2 The terms 'average' and 'smallest' used in claims 1 and 2 are conflicting with each others and leave the reader in doubt as to the meaning of the technical feature to which they refer, thereby rendering the definition of the subject-matter of said claims unclear, Article 6 PCT.

4 INDEPENDENT CLAIM 1

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

Document D1 (see fig.2, col.4, l.3-31) discloses an X-ray imaging apparatus comprising production means arranged to produce X-rays from a plurality of X-ray sources (11-21) spaced around an object location (4) and spaced from each other by a source spacing (see col.4, l.28-31, where the source spacing is defined by $2\pi/(m \times n)$), a plurality of X-ray sensors (51-61) arranged to be spaced around the object position (4) so as to detect X-rays emitted from the X-ray sources and passing through the object position (4), and control means arranged to control the order in which the X-ray sources are active such that the smallest displacement ($2\pi/n$)

between an active X-ray source in one period and an active X-ray source in the subsequent period is greater than the source spacing (see col.4, l.14-18: the X-radiators are successively switched on).

Document D2 (see p.17,l.17 - p.18,l.32) also discloses such an apparatus.

5 DEPENDENT CLAIMS 2-9

Dependent claims 2-9 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT), the reasons being as follows:

- an apparatus in which a plurality of source positions are active simultaneously, in which there is no overlap between the groups of sensors, and in which all the sensors are used is known from D1 (see e.g. fig.2, col.4, l.3-11),
- an apparatus comprising a plurality of X-ray tubes each providing a plurality of source positions is already known from D3 (see fig.1)

6 DEPENDENT CLAIMS 10-12

The combination of the features of dependent claims 10-12 is neither known from, nor rendered obvious by, the available prior art.

7 MISCELLANEOUS

7.1 Independent claim 1 is not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (document D1) being placed in the preamble (Rule 6.3(b)(I) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).

7.2 The features of the claims 1-12 are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).